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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,355	12/29/2003	Gaetan L. Mathieu	P80CI-US	3896
27520	7590	03/24/2005	EXAMINER	
FORMFACTOR, INC. LEGAL DEPARTMENT 2140 RESEARCH DRIVE LIVERMORE, CA 94550			LEON, EDWIN A	
			ART UNIT	PAPER NUMBER
			2833	

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/750,355	MATHIEU ET AL.
	Examiner	Art Unit
	Edwin A. León	2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 25 February 2002.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 84-107 is/are pending in the application.
4a) Of the above claim(s) 91,92,98-100 and 103 is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 84-90,93-97,101,102 and 104-107 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 12/29/03 is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

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Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: ____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species 14, Figs. 29a-32 in the reply filed on February 22 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 1865 in Fig. 30. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in

the next Office action. No new matter should be entered. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 96 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant's claim is deemed unclear since the structure and the function of the hole in the support plate are not clearly described in the Specification nor shown in the Drawings. Appropriate correction is required. No new matter should be entered.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 84-86, 93, 95, 97, 101-102 and 104-107 rejected under 35 U.S.C. 102(b) as being anticipated by Korunsky et al. (U.S. Patent No. 4,941,832). With regard to Claims 84-86, Korunsky et al. discloses an electronic interconnect element (2) comprising: a first leaf (32) portion; a contact tip (34) located on a first surface of the first leaf (32) portion; and at least one support point (30) coupled to an opposite surface of the first leaf (32) portion in such a relationship to the contact tip (34) that the first leaf (32) portion acts as a spring when the contact tip (34) engages a contact feature (5) of an electronic device (6) and urges the contact tip (34) against the contact feature (5) substantially without wiping. See Figs. 1-3.

The limitations "the leaf portion is formed lithographically" and "the contact tip (34) is formed by a process of plating into an opening in a substrate" are given little patentable weight since the method of forming the device is not germane to the issue of patentability of the device itself.

With regard to Claim 93, Korunsky et al. discloses the first leaf (32) portion being a generally planar support plate (Fig. 1). See Figs. 1-3.

With regard to Claim 95, Korunsky et al. discloses the support plate (Fig. 1) being rectangular (cross section shown in Fig. 1). See Figs. 1-3.

With regard to Claim 97, Korunsky et al. discloses the support plate (Fig. 1) being shaped such that a middle portion (36) is stressed in a torsional manner (Fig. 2). See Figs. 1-3.

With regard to Claim 101, Korunsky et al. discloses an electronic interconnect element (2) comprising a plurality of leaf portions (20, 22, 32); a contact tip (34) on a

first surface of one of the plurality of leaf portions (20, 22, 32); and at least one support point (30) between an opposite surface of the one leaf portion (20, 22, 32) and another of the plurality of leaf portions (20, 22, 32) in such a relationship to the contact tip (34) that the plurality of leaf portions (20, 22, 32) act as a spring when the contact tip (34) engages a contact feature (5) of an electronic device (6) and urge the contact tip (34) against the contact feature (5) substantially without wiping. The method limitations are deemed inherent and are rejected as shown above. See Figs. 1-3.

With regard to Claim 102, Korunsky et al. discloses an electronic interconnect element (2) comprising: a first leaf (32) portion; a contact tip (34) located on a first side of the first leaf (32) portion; at least one first support point (30) coupled to an opposite side of the first leaf (32) portion offset from the contact tip (34); a second leaf portion (10) having a first side coupled to the at least one first support point (30); and at least one second support point (8) coupled to an opposite side of the second leaf portion (10) offset from the at least one first support point (30). See Figs. 1-3.

With regard to Claim 104, Korunsky et al. discloses a third support point (28) spaced apart from the first support point (30) and coupled to the opposite side of the first leaf (32) portion offset from the contact tip (34), and a fourth support point (14) spaced apart from the second support point (8) and coupled to the opposite side of the second leaf portion (10) offset from the first contact point (34). See Figs. 1-3.

With regard to Claim 105, Korunsky et al. discloses a third leaf portion (22) having a first side coupled to the second support point (8), and a third support point (28)

coupled to an opposite side of the third leaf portion (22) offset from the second support point (30). See Figs. 1-3.

With regard to Claim 106, Korunsky et al. discloses the contact tip (34), the first (32) and second (10) leaf portions and the first (30) and second (8) support points being structurally distinct elements that are joined one to another. See Figs. 1-3.

With regard to Claim 107, Korunsky et al. discloses an electronic interconnect element (2) comprising: a plurality of leaf portions (20, 22, 32); a contact tip (34) located on a first side of one of the plurality of leaf portions (20, 22, 32); at least one first support point (30) coupled to an opposite side of the one leaf portion offset from the contact tip (34); another of the plurality of leaf portions (20, 22, 32) having a first side coupled to the at least one first support point (30); and at least one second support point (8) coupled to an opposite side of the other leaf portion (20, 22, 32) offset from the at least one first support point (30). See Figs. 1-3.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 87-90 and 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korunsky et al. (U.S. Patent No. 4,941,832). With regard to Claims 87-90,

Korunsky et al. discloses the claimed invention as shown above except for the substrate being formed of silicon, metal, ceramic or an organic.

Still, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the substrate from silicon, metal, ceramic or an organic, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

With regard to Claim 91, Korunsky et al. discloses the claimed invention as shown above except for the support plate being disc-shaped.

However, it would have been obvious to modify the support plate being disc-shaped since applicants have presented no explanation that these particular configurations of the support plate are significant or are anything more than one of numerous configurations a person of ordinary skill in the art would find obvious. A change in shape is generally recognizing as being within the level of ordinary skill in the art. *In re Dailey*, 149 USPQ 47 (CCPA 1976).

Allowable Subject Matter

9. Claim 96 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112 set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The references fail to teach, disclose, or suggest, either alone or in combination, the support plate having a hole there through and in combination with the rest of the limitations of the base and intermediate claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Matsuoka (U.S. Patent No. 5,286,208), Kuan (U.S. Patent No. 6,083,059), Wagner (U.S. Patent No. 6,190,193), and Brown et al. (U.S. Patent No. 5,213,513) disclose electronic interconnecting elements having leaves.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (571) 272-2008. The examiner can normally be reached on Monday - Friday 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800, extension 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edwin A. Leon
AU 2833

EAL
March 17, 2005


Gary Paurn
Primary Examiner